

GRANAT, I. YA.

Description of Metals, I. Ya. Granat, Candidate Tech Sci. V. M. Tageyev, Engr., 7 pp

"Stal!" No 2

In spite of the great engineering, technologic, and economic advantages of continuous casting of steel economic advantages of continuous casting continuous parts, the beaid method of conducting continuous casting—with a moving and stationary crystallizer—cannot be said to be sufficiently developed for efficient industrial use. It is important and necessary to intensify experimental work in this field.

FUB

SAMARIN, A.M.; YEFIMOV, L.M.; VESEIKOV, N.G.; CHMAN, R.Z.; SHABANOV, A.N.;

MCRCZENSKIY, L.I.; GRANAT, I.Ya.; TOCHINSKIY, A.S.; ALYAVDIN, V.A.;

DANILOV, P.M.; PETRIKEYEV, V.I.; POPOV, B.N.; BCEKOV, T.M.;

ROSTKOVSKIY, S.Ye.; GAVRISH, D.I.; D'YAKONOV, N.S.; TIMOSHPOL'SKIY,

M.M.; ROMANOV, V.D.; POCHTMAN, A.M.; MELESHKO, A.M.; PODGORETSKIY,

A.A.; OFENGENDEN, A.M.; BRONSHTEYN, V.M.; PRIDANTSEV, M.V.; LIVSHITS,

G.L.; ROZHKOV, V.A.; RUTES, V.S.

Reports (brief annotations). Biul. TSNIICHM no.18/19:15-16 157. (MIRA 11:4) 1. Chlen-korrespondent AN SSSR (for Samarin). 2. TSentral'nyy nauchno-issledovatel skiy institut chernoy metallurgii (for Rutes, Rostkovskiy, Pridantsev, Idvshits, Rozhkov). J. Stal'proyekt (for Shabanov). 4. Kuznetskiy metallurgicheskiy kombinat (for Alvavdin, Danilov, Petrikeyev). 5. Zavod "Elektrostal" (for Popov). 6. "Dneprospetsstal" (for Bobkov). 7. Glavogneupor Ministerstva chernoy metallurgii SSSR (for Gavrish). 8. Planovoye upravleniye Ministerstva chernoy metallurgii SSSR (for D'yakonov). 9. Otdel rabochikh kadrov, truda i zarplaty Ministerstva chernoy metallurgii SSSR (for Timoshpol'skiy). 10. Glavytorchermet Ministerstva chernoy metallurgii SSSR (for Homanov). 11. Giprostal' (for Pochtman). 12. Zavod im. Voroshilova (for Meleshko). 13. Zavod "Zaporozhstal" (for Podgoretskiy). 14. Stalinskiy metallurgicheskiy mayod (for Ofengenden). 15. Nizhne-Tagil'skiy metallurgicheskiy kombinat (for Bronshteyn). (Steel-Metallurgy)

137-58-6-11845

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 95 (USSR)

AUTHORS: Morozenskiy, L.I., Granat, I.Ya., Tochinskiy, A.S.

TITLE: Continuous Casting of Steel (Nepreryvnaya razlivka stali)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii, 1957, Vol. 18, pp 95-101

ABSTRACT: Three methods of continuous casting of steel are examined. One is characterized by the fact that the level of the metal in the crystallizer (K) changes periodically as the result of periodic changes in the rate of withdrawal of the billet (B) or the rate at which the metal is poured. This principle is employed in an experimental pilot plant with inclined K for pouring B measuring 250x250 mm. Over 8000 tons of B have been cast on passable cast B is 92-95% of the weight of the molten steel, and the yield of passable rolled product is 86-90% of the weight of after filling the K with metal to the given level, the flow of metal is cut off and the stage of B considered.

Card 1/2 metal is cut off and the stage of B coming into being is held in the K for a firm rim to form. Then the K is opened, and the B

137-58-6-11845

Continuous Casting of Steel

Is lowered so that its upper portion serves as a floor for the next filling. The K halves are closed, and the next load of metal is poured. Multiple repetition of this cycle builds up the B step by step. In practice, casting is done in two K, metal being poured into one while the other is held. B of 270x270 cross section are cast in an experimental vertical pilot plant with two K built on the foregoing principle. Over 12,000 t of B have been thus cast. The yield of good cast B is 96-92% of the weight of the molten steel, and the yield of good rolled product is 88-92% of the weight of the cast B. The third method, continuous multisection bottom pouring, is designed to cast B of small cross section from large capacity ladles. The metal is poured from above into one of the parallel sections of the K; the others receive it by siphon from the first through channels connecting the sections. An experimental 5-section plant for casting B of 115x115 mm at 25-30 t/hr has been built on this principle.

1. Steel--Casting 2. Steel--Processing 3. Industrial plants--Equipment

Card 2/2

GRANAT, I. YA.

137-1958-2-2489

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 43 (USSR)

AUTHORS: Morozenskiy, L.I., Zitel', O.D., Granat, I.Ya.

TITLE: Phenomena Discovered With Radioactive Tracers During a Study of the Solidification Process in Steel Ingots (Yavleniya, obnaruzhennyye metodom radioaktivnykh indikatorov pri issledovanii zatverdevaniya stal'nykh slitkov)

PERIODICAL: V sb.: Fiz.-khim. osnovy proiz-va stali. Moscow, AN SSSR, 1957, pp 765-780. Diskus., pp 781-791

ABSTRACT: A study was made of the phenomenon of the displacement of metal during solidification of an ingot and of what causes it. Experiments were conducted on ingots with a large N/D value with the aid of the radioactive isotopes S³⁵, P³², and W¹⁸⁵, which had first been dissolved in molten metal and then were poured into either the upper or the lower part of the ingot. The distribution of the isotope was determined by autoradiography of longitudinal templets of the ingots under study. The steel used in the experiments was 30KhNZA, which had been cast into vertical ingots measuring 270x270x2600 mm, and steel 45 in ingots 250x250x Card 1/3

137-1958-2-2489

Phenomena Discovered With Radioactive Tracers (cont.)

that the tracers were not evenly distributed throughout the ingots, that instead they formed alternating bands which were parallel to the crystallization front. On a sulfur print these bands did not show up. The dispersion of the tracers occurred only in a downward direction and at great speeds, which reached 20 m/min. These phenomena resulted neither from an isotope exchange nor from convection currents, but were attributed to a shrinkage of the metal at the moment it crystallizes. According to this hypothesis the currents in the molten metal caused by the shrinkage develop most fully only at those sections of the crystallization front at which the vertical component of the hydrostatic pressure of the metal on the sides is either an upward one or equals zero. The greater the coefficient of shrinkage, the N/D ratio, and the crystallization rate, the greater will be the speed of the flow. The motion exhibited by the metal was linked to the structure of the ingot which was characterized by the fact that the orientation of the secondary axes of the dendrites in the half-section adjoining the upper face of the inclined ingot coincided with the direction of the currents, notwithstanding the orientation of the primary axes. Moreover, in the inclined ingot the macrostructure was asymmetrical; this also was accounted for by the action of the currents in the ingot metal, which were moving

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137-1958-2-2489

Phenomena Discovered With Radioactive Tracers (cont.)

at different speeds along the top and bottom faces of the ingot. The currents in the metal, which descend near the crystallization front, could be one of the causes of the extra-axial chemical heterogeneity (the "branches") which develop. The foregoing hypothesis tends to support the position which holds that, as the angle of taper of ingots which broaden upward increases, the "branches" show up less sharply, for this corresponds to the reduced flow of metal along the crystallization front.

V.N.

1. Steel-Solidification 2. Steel-Displacement-Theory

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SOV/137-58-9-18689

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 78 (USSR)

AUTHORS: Zigel', O.D., Morozenskiy, L.I., Granat, I.Ya.

TITLE: Factors Governing the Appearance of Extra-axial Chemical

Inhomogeneity in Steel Ingots (Faktory, opredelyayushchiye razvitiye v stal'nykh slitkakh vneosevoy khimicheskoy neod-

norodnosti)

PERIODICAL: V sb.: Staleplavil'n proiz-vo. Moscow, Metallurgizdat,

1958, pp 75-88

ABSTRACT: A study of the process of ingot formation was first conducted

with billets of high height-to-cross-section ratio produced by continuous casting of steel. P³², W¹⁸⁵, and S³⁵ were introduced into the metal in the tundish. Macroscopic radiography of templets showed the isotopes to be in layers parallel to the plane of crystallization of the metal, the dissemination thereof into the ingot proceeding downwards at a rate of 10 m/min under the conditions of the experiment. This distribution of the isotope reveals the cause of its dissemination into the ingot

to be primarily transfer by streams of liquid metal, the movement of which is induced, in the crystallization of an ingot

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SOV/137-58-9-18689

Factors Governing the Appearance of Extra-axial Chemical (cont.)

of killed steel, primarily by shrinkage upon transition from the liquid to the solid state. Metal containing W^{185} was added to in sand molds of various shapes after they had been filled. It was found that the radioactive tracer enters the casting in flows of metal along the front of crystallization at a rate considerably greater than the rate of motion of the metal in the rest of the liquid mass. The direction of displacement of the metal in the casting is not determined either by the temperature distribution in the casting or by the temperature of the metal in the incoming flow. The angle to the horizontal of segments of the front of crystallization has a significant effect upon the formation of longitudinal flows along the front. The influence of displacements of metal along the front of crystallization upon the degree of extraaxial chemical inhomogeneity was verified by loam casting of a 1.5-t ingot the sides of which had tapers of 30, 20, 5, and 0%. The appearance of "whiskers" adjacent to the vertical edge was noticeably more intensive than near the edges with 30% taper. The intensity of the metal flows along the front of crystallization depends upon the rate of solidification. Zonal inhomogeneity may occur only where the rate of crystallization is capable of giving rise to an intensified flow of metal along the front, and the formation of a region where 2 phases exist simultaneously. This explains the formation of pronounced inhomogeneities in the hot top of an ingot and the absence Card 2/3

SOV/137-58-9-18689

Factors Governing the Appearance of Extra-axial Chemical (cont.)

thereof toward the bottom. The differences in the chemical composition of the steel affect the intensity of "whisker" development because they result in different degrees of shrinkage of the metal.

L.K.

1. Steel--Processing 2. Steel--Crystallization 3. Steel--Structural analysis

4. Radioisotopes--Diffusion 5. Steel--Radiographic analysis

Card 3/3

SOV/123-59-15-60472

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, pp 223 - 224 (USSR)

AUTHORS:

Zigel', O.D., Morozenskiy, L.I., Granat, I.Ya.

TITLE:

Factors Determining the Development of Non-Axial Chemical and Structural

Heterogeneity in Steel Bars and Castings

PERIODICAL:

V sb.: Zatverdevaniye metallov. Moscow, Mashgiz, 1958, pp 338 - 351

ABSTRACT:

In order to elucidate the causes of the development of non-axial heterogeneity tests were carried out with steel bars of continuous casting with a crosssection of 250 · 250 and 270 · 270 mm, which were cast in vertical and inclined position (at an angle of 30° with respect to the horizon), and with steel castings of various configuration produced in sand molds. During the crystallization period of the bars and castings, steel containing the radio-active isotopes P32, W¹⁸⁵ or S³⁵ was added. The radiograms obtained permitted to determine the parts of diffusion within the bulk of the casting, of this steel which compensated the solidification shrinkage. It was found out that the steel supplied formed flows near the crystallization front, which almost did not reach the central zone of the liquid metal. The most

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Factors Determining the Development of Non-Axial Chemical and Structural Heterogeneity in Steel Bars and Castings

intensive flows occured near those sections of the crystallization front which are located horizontally above the liquid metal or vertically, where the vertical component of hydrostatic pressure is directed upwards or equal to zero. Near the front sections located horizontally below the liquid metal, e.g. in the bottom part of the bar, the flows were developed weakly or did not appear at all; here the supply takes place mainly at the expense of the above-located layer of metal. The flow intensity near the inclined sections may have a number of intermediate values, depending on the angle and direction of inclination. For instance the flow intensity is greater in bars growing wider at the bottom than in bars with vertical walls, and smaller in bars growing in width at the upper part. In both cases the difference is the more considerable, the more slanting the walls are. Also the extension of the crystallization front affects the flow intensity. On the basis of the comparison of the data obtained on the flow direction of the metal supply with the actual data on the location of dendritic heterogeneity ("whisker") in bars of bubble-free steel, it can be concluded that these flows are the causes of the appearance of "whiskers". Another necessary condition for the formation of whiskers is the existence of a zone of solid-liquid metal. At a high solidification rate this zone does not develop, therefore "whiskers" are not formed.

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SOV/123-59-15-60472

Factors Determining the Development of Non-Axial Chemical and Structural Heterogeneity in Steel Bars and Castings

At too low cooling rates "whiskers" might not form either, in spite of the presence of a developed zone of solid-liquid metal, since in this case the flow intensity is considerably reduced. Effects of the flows on the character of the structure were also discovered. In bars of continuous casting, crystallized in an inclined position at an angle of 30° relative to the horizon, at the upper face, where the flows develop most strongly, longer columnar crystals were formed than at the lower face, in consequence of the heating effect of the flows. In the zone of increased development of flows the direction of the dendritic axes of the second order coincides with the direction of the flows and does not depend on the direction of the axis of the first order. lo figures.

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ZHURAVLEV, P.Ya.; EFROS, D.I.; KUTENKO, Yu.V.; POKROVSKIY, V.A.; GRANAT, I.Ya.; MOROZENSKIY, L.I.; GORSKIY, V.B.

Influence of vacuum treatment and the conditions of steel deoxidation on the formation of surface defects in continuous ingots. Stal! 25 no.10:891-894 0 '65.

1. Gor'kovskiy mashinostroitel'nyy savod. (MIRA 18:11)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000516520012-9

L 30059-66 EWP(w)/EWP(v)/EWP(k) IJP(c) ACC NR: AP6020590 WW/EM SOURCE CODE: CZ/0026/66/011/001/0063/0066 AUTHOR: Granat, Ludek (Prague) OnG: Research Institute of Mathematical Machinery, Prague (Vyzkumny ustav matematickych stroju) TITLE: Note on the article of M. Kuniak: graphic determination of the characteristics SOURCE: Aplikace matematiky, v. 11, no. 1, 1966, 63-66 TOPIC TAGS: construction, graphic technique, solid geometry ABSTRACT: A conoid formed by normals constructed at points of the characteristics of an enveloping helical surface to the generating surface of a cylinder of rotation is a hyperbolic paraboloid. The characteristic of the enveloping helical surface can also be constructed as the line of intersection of the generating surface and the hyperbolic paraboloid when the generating surface is a second-order surface of rotation. The characteristic of the enveloping helical surface, where the generating surface is a torus, is an eighth-order curve when can be determined with the two equations derived in the article. Orig. art. has: 6 formulas. GPRS SUB CODE: 12/ SUBM DATE: 02Apr65/ ORIG REF: CC1/ SOV REF:

EWT(d) L 10611-66 IJP(c)

ACC. NR. AP6004058

SOURCE CODE: CZ/0081/65/090/002/0194/0199

AUTHOR: Granat, Ludek (Prague) यग्डड

29

ORG.:

none

16,44,55

TITLE:

p-Projection of a straight line on a surface

SOURCE:

Casopis pro pestovani matematiky, v. 90, no. 2, 1965, 194-199

TOPIC TAGS: construction, projective geometry, surface geometry, analytic

geometry

ABSTRACT: The article demonstrates a method of analytical construction of the theory of p-projections of a straight line on a surface and derives additional relations which can be used in graphic constructions. Orig. art. has: 10 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 02Apr64 / ORIG REF: 001 / OTH REF: :001 / SOV REF: 001

jc

Card 1/1

GRANAT, L. N., starshiy nauchnyy sotrudnik

Prevention of incipient puerperal mastitis. Akush. i gin. no.2: 29-33 162. (MIRA 15:6)

1. Iz 2-go akusherskogo otdeleniya (zav. - prof. S. G. Khaskin) Instituta akusherstva i ginekologii (dfr. - chlen-korrespondent AMN SSSR prof. P. A. Beloshapko[deceased]) AMN SSSR.

(BREAST_DISEASES) (PUERPERIUM)

GRANAT, L.N.

Puerperal mastitis and its clinical course under conditions of mass immunization with staphylococcal anatoxin; from data of obstetrical and surgical hospitals and polyclinics in Leningrad. Akush. i gin. 40 no.1:25-27 Ja-F *64.

1. 2-ye akusherskoye otdeleniye (zav. - prof. S.G. Khaskin) Instituta akusherstva i ginekologii AMN SSSR (dir. - prof. M.A. Petrov-Maslakov), Leningrad.

GRANAT, L.N.; MCSKALENKO, Yu.Ye.

Changes in the hemodynamics in the female breast under the effect of heat and cold stimulation. Fiziol. zhur. 51 no.9:1100-1107 S (MIRA 18:9)

1. Institut akusherstva i ginekologii AMN SAGR i Institut evolutsionnoy fiziologii i biokhimii imeni I.M.Sechenova AN SCSR, Leningrad.

CRANAT, L.N.; IVANOVA, V.V.; YUKHNOVSKAYA, S.Yu., red.

[For the young mother] Molodoi materi. Moskva, Meditsina, 1965. 34 p. (MIRA 18:6)

· en alta la tradició de tros allacións desemblacións y estatura actual en la con-

VOZNESEMDKIY, B.N.; LOGINOV, D.F. [deceased]; GRANAT, M.B.; BELIKOV, B.S., redaktor; SOKOLOVA, R.Ya., tekhnicheski redaktor

[Album of basic circuits for combined operation of dial telephone exchanges with machine-switching and step-by-step systems] Promezhutochnoe oborudovanie dlia sovmestnoi raboty ATS mashinnoi i shagovoi sistem. Moskva, Gos. isd-vo lit-ry po voprosam sviazi i radio, 1954. 187 p. [Microfilm] (MIRA 8:6) (Telephone, Automatic)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000516520012-9"

BORODZYUK, G.G.; STEPANOV, G.N.; DRIATSKIY, N.M.; IONTOV, L.Ye.; KOVALEV, S.M.; BLOKHIN, A.S.; DVORTSOV, L.D.; IUGOVSKOY, N.Ye.; MERKULOV, A.G.; SMIRHOV, B.P.; ROGINSKIY, E.N.; BALAH-IL'YEVSKAYA, I.A.; IZRAILIT, S.G.; GRANAT, M.B.; ZARIN, S.A., otv.red.; FEDOROVSKAYA, L.N., red.; MARKOGH, K.G., tekhn.red.

The many factor that a proper programme in the continuous metallic production of the control of the continuous factors and the control of the

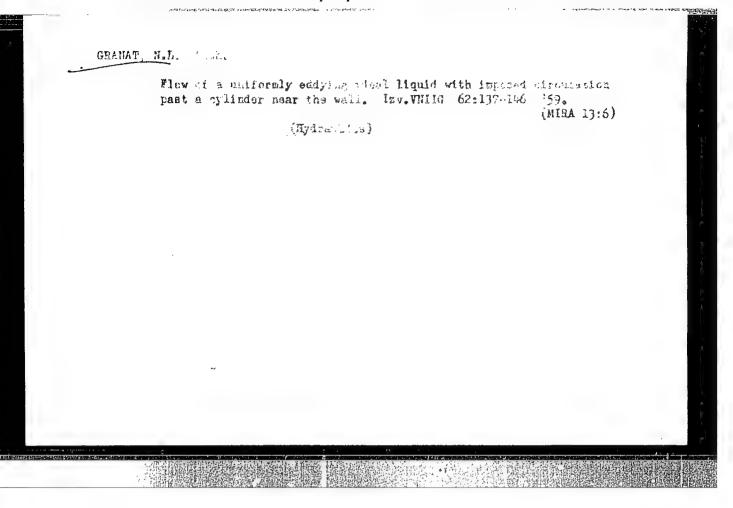
[Multichannel apparatus for high-voltage telephony on overhead lines and cables] Mnogokanal'naia apparatura vysokochastotnogo telefonirovaniia po vozdushnym i kabel'nym liniiam sviazi. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1959. 511 p.

(MIRA 14:1)

(Telephone-- quipment and supplies)

"APPROVED FOR RELEASE: 03/13/2001 CIA-

CIA-RDP86-00513R000516520012-9



S/179/60/000/01/010/034 E031/E535

AUTHOR: Granat, N. L. (Leningrad)

TITLE: The Motion of a Rigid Body in the Pulsating Flow of a Viscous Fluid

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1960, Nr 1, pp 70-78

ABSTRACT: The steady oscillations of a sphere in a flow of fluid which is pulsating according to an arbitrary law in which the Reynolds number of the motion is small is considered. An expression is used for the force, obtained by solving the equations of motion of the fluid at Reynolds numbers of less than unity, which is a generalization of Stokes' expression for the harmonic oscillations of a body in a fluid which is undisturbed at infinity to the case of the arbitrary periodic motion of a sphere in a pulsating flow. The fluid is assumed to be homogeneous, viscous and incompressible. Consideration of flow at low Reynolds number allows the convective terms in the expression for the acceleration to be ignored. An Card 1/4 approach due to A. I. Lur'e is used to reduce the equations

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of motion to a single equation involving the function f, where curl $u = f \times r$, from which the velocity u can be determined. f is defined by a scalar differential equation. If the velocity of the pulsating flow is given in the form of a Fourier series, the velocity of the sphere will have the same form, and so the expression for f is sought in a similar form. The coefficients in the expansion for the velocity of the sphere are determined by the equation of motion of the sphere, m_u = K where the force K is calculated by applying the theorem about the change in the momentum to the volume of fluid b between the sphere and a control surface. It is seen that to each harmonic component of the flow velocity there corresponds a harmonic component of the sphere velocity different from the first in amplitude and phase. By considering the ratio of the amplitudes of the components of the two velocities and their phase differences, it is seen that a sphere which is denser than

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the fluid will oscillate with amplitudes less than the amplitudes of the flow, the converse holding if the sphere is less dense than the fluid. The oscillations of the sphere which is denser than the fluid lag in phase and the converse is true for a sphere which is less dense than the fluid. The generalized Stokes' force referred to above can be used to estimate the error when the force applied to the body is given approximately as the sum of the inertial forces arising through the motion of the body in an ideal fluid and the viscous drag forces in stationary motion. dissipation of energy caused by the relative oscillations of solid particles in a fluid is discussed, the solution derived above being used to obtain an expression for the dissipation. Next the distribution of the dissipation of energy near the sphere is considered and the dimension of the region of disturbance determined. Acknowledgment is made to M. A. Dement'yev for advice and directives.

Card 3/4

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The Motion of a Rigid Body in the Pulsating Flow of a Viscous Fluid
There are 5 figures and 9 references, 5 of which are
Soviet, 1 French and 3 English.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki (All Union Scientific Research Institute of Hydraulic Engineering)

SUBMITTED: August 8, 1959

Card 4/4

\$/124/61/000/009/019/058 D234/D303

AUTHOR:

Granat, N.L.

TITLE:

Motion of a free solid particle in a turbulent stream of liquid .

PERIODICAL:

Referativnyy zhurnal. Mekhanika, no. 9, 1961, 80, .

abstract 9 B576 (Izv. vses, n.-i., in-ta gidrotekhn.,

1960, 65, 63-75)

The author considers the motion of a free spherical TEXT: solid particle in a homogeneous unbounded pulsating stream of a viscous incompressible liquid at small values of Reynolds' number. In contrast to previous papers, neither the hypothesis of stationary character of the viscous resistance force not Boussinesq formula are utilized here. The solution of the problem is achieved in the following manner. It is supposed that the known velocity of the undisturbed pulsating stream of liquid (at infinity) U, and the unknown velocity of the particle situated in this stream U, can be expanded

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Motion of a free solid particle ...

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into a Fourier series. The velocity U of the disturbed motion of the stream is expressed with the aid of the continuity equation and the equations of motion in terms of expansion coefficients of the functions $U_{\rm W}$ and $U_{\rm S}$, after which the expression of the force K acting on the particle from the stream is easily determined in terms of the same coefficients. The substitution of the expressions of. Uw, Us, K into the equation of motion of the particle permits determination of the unknown coefficients of the expansion of the function Ug. Analysis of the results obtained shows that a free spherical particle in a pulsating stream of a viscous incompressible liquid acquires an average velocity equal to the average velocity of the stream, and a pulsation velocity different from the pulsation velocity of the stream. Each harmonic component of the velocity of the particle differs from the corresponding harmonic component of the velocity of the stream in amplitude as well as in phase (except the case when the donsity of the particle p in equal to the density of the stream Pw). The ratio of corresponding amplitudes and the phase displacement are functions of two dimensionless

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parameters

$$\Delta = \frac{\rho_s}{\rho_w}$$
 and $\alpha_n = r_o \sqrt{\frac{n\omega}{2\nu}} = \sqrt{R_n}$

where r_0 is the radius of the particle, $\mathcal I$ the kinematical viscosity coefficient, $\mathbf I$ the order of the harmonic in the Fourier expansion, $\mathcal U$ the frequency of oscillations. The oscillations of a particle of a density larger than that of the liquid $(\Delta > 1)$ have smaller amplitudes, and are behind the corresponding oscillations of the liquid in phase; the opposite takes place in the case $\Delta < 1$. The maximum phase displacement possible is 90° . From the values $\mathcal I_1 > 2$ the dependence of the phase displacement and the ratio of amplitudes on $\mathcal I_1 = 0$ becomes very weak. A formula is deduced for the force K acting on a sphere in a pulsating stream which is a generalization of Stoke's formula obtained for the case of harmonic oscillations of a sphere in a liquid at rest. This formula is compared with the expression for the force $\mathcal I_1 = 0$.

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Motion of a free solid particle... D234/D305

of the hypothesis of stationary motion. It is shown that the difference K - K (i.e. the force not taken into account by the hypothesis of stationary motion) depends essentially on α_n and Δ .

The ratio of the amplitudes of corresponding harmonics of the unaccounted force K - K and the total force of K (which characterizes the error caused by the hypothesis of stationary motion) reaches its maximum value (0.551) at $\alpha_n = 1.225$ and $\alpha_n = 0$. For $\alpha_n > 15$ the hypothesis of stationary motion leads to a very small error.

Abstracter's note: Complete translation $\alpha_n = 1.235$ and $\alpha_n = 1.235$ an

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GRANAT, N.L. (Leningrad)

Turbulences produced by a body moving in a viscous fluid. Izv.

AN SSSR. Otd. tekh.nauk.Mekh. i mashinostr. no. 1:86-89 Ja-F '61.

(MIRA 14:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki. (Turbulence) (Fluid dynamics)

GRANAT, N.L., kand. fizika-matem. nauk

Considerable oscillations of a sphere in a viscous fluid. Izv. VNIIG 76:289-298 64. (MIRA 18:10)

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the equations of	motic. for the who	ie system, the forrown	Z wifetti.	
	loss of sphere on ty) R. Izvestiya. Me scous flow, visc	R. Izvestiya. Mekhanika, no. 1, 196 scous flow, viscosity, two phase filter con the respective and density of register as assumed to occasist register as assumed to occasist the equations of motion for the who	loss of sphere oscillations in a two-phase mixture (vibro ty) / / R. Izvestiya. Mekhanika, no. 1, 1965, 34-41 scous flow, viscosity, two phase flow, drag coefficient,	

EWP(m) /EWT() /EPR/EWA(d) EMA(1)/ Pt-1/Pt-1/Ps-1 AEDC(c)/SSD/AFWL/

1 124 ALDER - 33

+ the open typosis

AUTHOR: Granat, N. L. (Leningrad)

TITLE: Steady-state oscillations of a container with a two-phase mixture

SOURCE: AN SSSR. Izvestiya. Mekhanika i mashinostroyeniye, no. 5, 1964, 61-64

TOPIC TAGS: two phase-flow, incompressible flow, solid phase, viscous fluid flow, vibration, friction force

ABSTRACT: The force and energy required to maintain given steady-state oscillations in a two-phase mixture were calculated, using previous results on motion of solid particles in pulsating, viscous, incompressible liquids. The container is assumed to have a volume V and to contain a small amount of spherical solid particles (of concentration s^*) homogeneous in distribution in a liquid medium. A linear, steady, harmonic motion is applied to the system, $u = A\sin \omega t$, and the equation of motion of the system is given by

 $P = mu' + \rho V s (\Delta - 1) w \qquad (\Delta = \rho_0/\rho) \quad \text{where} \quad m = m^\circ + \rho V [1 + s(\Delta - 1)]$

is the mass of container plus mixture. Here $\dot{\omega}$ is determined from viscous flow

Card 1/2

L 22169-65

ACCESSION NR: AP5002593

analyses of solid particles in a pulsating fluid given by N. L. Granat (Dvizheniye tverdogo tela v pul'siruyushchem potoke vyazkoy zhidkosti. Izv. AN SSSR, OTN, heknanka i mashinostroyeniye, No. 1, 1960; and Nemalysye kolebaniya shara v vyazkoy zhidkosti. Izv. VNIIG, t. 76, 1964), both for oscillation amplitudes small and large relative to particle dimensions. Next, ω is snown to be a function of trelative density of solid particles) and ω $\omega = -\sqrt{2} \frac{1}{2} \frac{$

 $\mathbf{H} = A^{\bullet} \sqrt{\omega^2 (k + k_0)^2 + (c - m^{\bullet} \omega^2)^2}$

where k is a reduced drag coefficient, is forty times lower than the magnitude one would obtain by assuming no relative motion between the solid particles and the container. Orig. art. has: 13 equations and 2 figures.

ASSOCIATION: none

SUBHITTED: 18May64

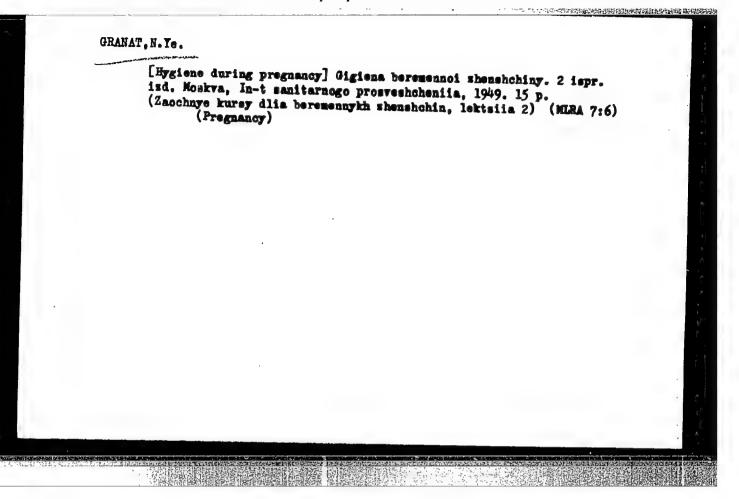
ENCL: 00

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OTHER: COO

Card 2/2



GRANAT, N. Le.

Rasskaz vracha (A physician's story). Izd. 3-e, ispr. i dop. Moskva, In-t san. prosveshcheniia, 1953. 38 p. (B-chka kolkhoznika)

SO: Monthly List of Russian Accessions, Vol. 7, No. 5, August 1954

GRANAT, N.Ye.

Decree of 1754 on the organization of midwife schools in Russia. Akush. i gin. no.5:88-91 S-0 '54. (MLRA 7:12)

l. Iz Instituta akusherstva i ginekologii (dir. L.G.Stepanov, nauchnyy rukovoditel' prof. P.A.Beloshapko) Ministerstva zdravo-okhraneniya SSSR.

(MIDWIVES.

hist. of educ. in Russia)

STEPANOV, L.G.; GRANT H.V.

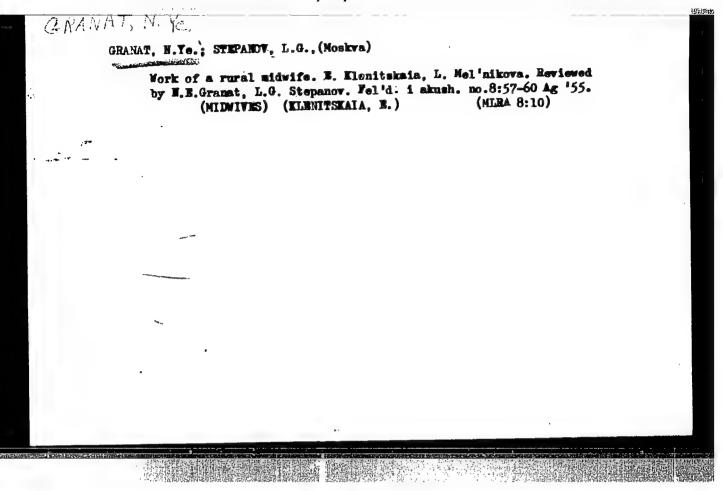
"Rural feldsher-midwife station." G.F.Konstantinov, I.IA.Bychkov.
Reviewed by L.G.Stepanov, N.E.Granat. Akush. 1 gin. no.6:87-89
E-D 154.

(MEDICINE, RURAL) (MIDWIVES) (KONSTANTINOV, G.F.)

GRANAT, N.Ye.

Work of a midwife at a midwifefeldeher station. Sov. med. 18 mo.8: 36-39 Ag 154. (MERA 7:8)

l. In nauchno-issledovatel'skogo instituta akusherstva i ginekologii Ministerstva zdravookhraneniya SSSR (dir. L.G.Stepanov, nauchnyy rukovoditel' prof. P.A.Beloshapko) (PUBLIC HEALTH, in Bussia, feldsher-midwife stations)



Physical culture during puerperium. Fel'd. i akush. 21 no.12:21-29 D'56. (MIRA 10:1)

GRANAT, Nikolay Yefimovich; BELOSHAPKO, Pavel Andreyevich, red. [Abortion; materials for lectures and talks] Abort; material dlia lektsii i besed. Pod red. P.A. Beloshapko. Moskva, In-t sanitarnogo prosveshcheniia, 1957. 54 p. (MIRA 11:10)

在一个是他们的第四位的特别的特别的的时候,他们就是他们的一个。

BULYGINA, Ye.A., stershiy nauchnyy sotrudnik; GRAHAT, N.Ye., kandidat meditsinskikh nauk; ZHELOKHOVTSEVA, I.N., kandidat meditsinskikh nauk

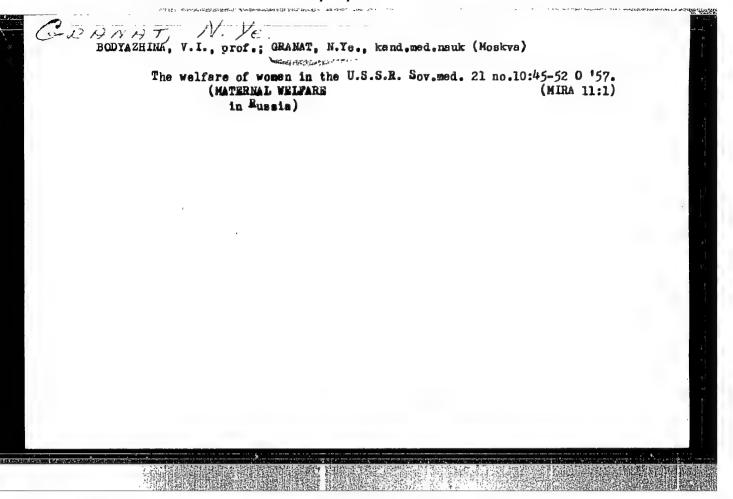
The role of a rural district hospital in the organization of obstetric services, Sov.zdrav. 16 no.8:29-34 Ag '57. (MLRA 10:10)

1. Iz Neuchno-issledovatel'skogo institute akusherstva i ginekologii (dir. I.G.Stapanov) Ministerstva zdravookhraneniya RSFSR.

(OBSTETRICS

obstetric serv. at general district hosp. in Bussia)
(HOSPITALS,

seme)



ARKHANGEL'SKIY, Boris Aleksandrovich, zasluzhennyy deyatel' nauki;

SPERANSKIY, Georgiy Nesterovich, zasluzhennyy deyatel' nauki;

GRANAT, N.Ye., red.; OSTROVSKAYA, I.M., red.; ZUYEVA, N.K.,
teknn.red.

[Mother and child; school for the young mother] Mat' i ditia; shkola molodoi materi. Moskva, Gos.izd-vo med.lit-ry, 1959.

[MIRA 12:12]

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Arkhangel'skiy, Speranskiy).

(PREGHANCY) (IMPANTS--CARE AND HYGIENE)

BARTEL'S, A.V.; GRANAT, N.Ye.; NOGINA, O.P.; SALGANNIK, G.M. [decessed]; SMIRNOV, G.I.; STEPANOV, L.G.; KHANOVA, T.M., red.; YAHKELEVICH, Ye.I., red.; GABERIAND, M.I., tekhn.red.

[Lecture course for pregnant women] Kurs lektsii dlia beremennykh zhenshchin. Pod red. L.G.Stepanova. Izd.3. Moskva. Medgis.
1959. 231 p. (MIRA 12:8)

1. Nauchno-issledovatel'skiy institut akusherstva i ginekologii Ministerstva zdravookhraneniya RSFSR (for all except Khanova, Yankelevich, Gaberland). 2. Direktor Nauchno-issledovatel'skogo instituta akusherstva i ginekologii Ministerstva zdravookhraneniya RSFSR (for Stepanov).

(PRENATAL CARE)

BODYAZHINA, V.I., prof.; GRANAT, N.Ye., kand.meditsinskikh nauk; OSTROVITYANOVA, L.V. (Moskva)

Some problems in the organization of gynecological service. Sev. zdrav. 19 no.6:16-20 **60. (MIRA 13:9)*

(GYNECOLOGY)

SHUB, Rafail L'vovich, zasluzhennyy deyatel nauki Latviyskoy SSR, prof.; CRANAT, N.Ye., red.; ZAKHAROVA, A.I., tekhn.red.

[Importance of vitamins and nitrofurans in obstetrics and gynecology] Znachenie vitaminov i nitrofuranov v akusherstve i ginekologii. Moskva, Medgiz, 1961. 157 p.

(MIRA 15:4)

(VITAMINS)

(FURAN) (GYNECOLOGY)

(OBSTETRICS)

BRAUDE, Isaak Leont'yevich [deceased]; PERSIANINOV, Leonid Semenovich.

Prinimali uchastiye: BRAUDE, A.I., doktor med.nauk; CRANAT, N.Ye.,
kand.med.nauk; ZHMUR, V.A., prof.; MAKEYEVA, O.V., doktor med.

nauk; RAFAL'KES, S.B., dotsent. PORAY-KOSHITS, K.V., red.;
BUL'DYAYEV, N.A., tekhn.red.

[First aid in obstetrical and gynecological pathology] Neotlozhnaia pomoshch! pri akushersko-ginekologicheskoi patologii. Moskva, Medgiz, 1962. 358 p. (MIRA 15:5) (FIRST AID IN ILLNESS AND INJURY) (OBSTETRICS)

GRANAT, N.Ye., kand.med.nauk; CHERNYAK, L.O., arkhitektor (Moskva)

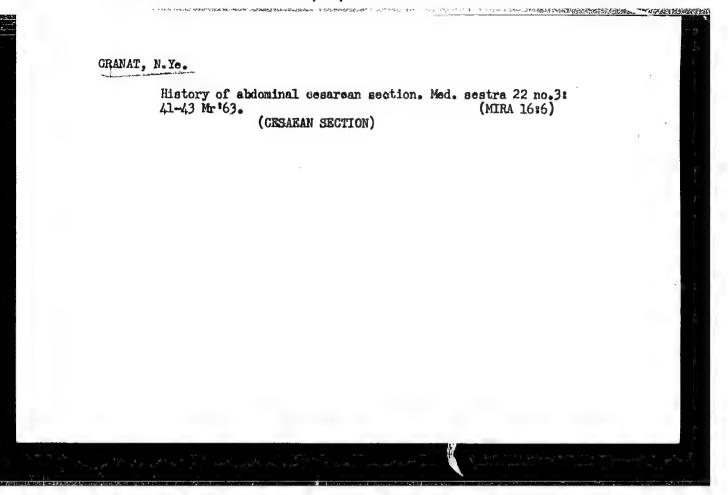
Standard designs for obstetrics buildings for rural hospitals. Sov.zdrav. 21 no.10:72-77 '62. (MIRA 15:10)

1. Iz Instituta akusherstva i ginekologii (dir. - prof. 0.V. Makeyeva) i Proyektnogo instituta Ministerstva zdravookhraneniya RSFSR (dir. A.A.Zhdanovich).

(HOSPITALS, GYNECOLOGIC AND OBSTETRIC)

DONIGEVICH, Mikhail Ivanovich; GRANAT, N.Ye., red.; LYUDKOVSKAYA, N.I., tekhn. red.

[Organization of obstetrical aid in a rural locality;
Mordvinian A.S.S.R.] Opyt organizatsii rodovspomozheniia
v selikkii mestnosti; Mordovskaia ASSR, Moskva, Medgiz,
1963. 118 p. (MIRA 16:7)
(MORDOVIA—ORSTETRICS)



MAKEYEVA, O.V., prof., red.; POPOVA, G.F., red.; CRANAT, N.Ye., kand. mekh. nauk, red.

[Woman's health] Zdorov'e zhenshchiny. Moskva, Meditsina, 1964. 181 p. (MIRA 17:11)

GARMASHEVA, Natal'ya Leonidovna, prof.; GRANAT, N.Ye., red.

[For the woman about the intrauterine development of the child] Zhenshchine o vnutriutrobnom razvitii rebenka.

Moskva, Meditsina, 1965. 23 p. (MIRA 19:1)

GRANAT, S. S.

Granat, S. S. - "Some problems in the realm of measurement and regulation of the wetness of linen for paper," Materialy Tsentr. nauch.-issled. in-ta bumazh. prom-sti, Issue 37, 1948, p. 251-73

— Bibliog: 8 items

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

GRANAT, S. S.

36192 Automatizatsiya i tekhnicheskiy progress proizvodstva. (S primech. red.) Bumazh. prom-st. 1949. No. 5. S. 38-42.

SO: Letopsi' Zhrunal nykh Satey, No. 49, 1949

GRANAT, S.S., glavnyy konstruktor.

Devices for control and measurement and automatic regulators in the wood pulp and paper industry (continuation). Bum.prom. 28 no.7:15-19 J1 '53.

(MLRA 6:7)

1. Otdel avtomatiki Gosudarstvennogo instituta proyektirovaniya tsellyulozno-bumashnoy promyshlennosti. (Wood-pulp industry)

GRAHAT, S.S.

Control and measuring instruments, and automatic control in pulp and paper production. Bum. prom. 28 no.12:16-21 D *53. (MERA 6:12)

1. Glavnyy konstruktor otdela avtomatiki Giprobuma. (Wood-pulp industry)

GRANAT, S.S.

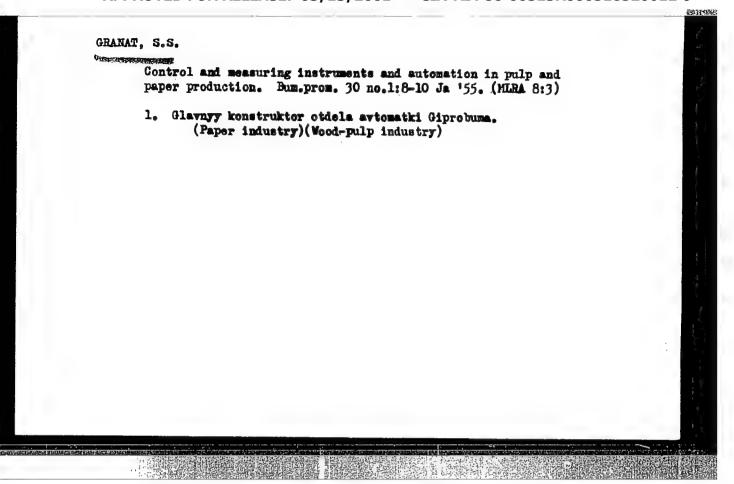
Control and measuring instruments and automation in pulp and paper production, Bum.prom. 29 no.8:10-13 Ag 154. (MLRA 7:9)

1. Glavnyy konstruktor otdela avtomatiki Giprobuma.
(Antomatic control) (Paper industry) (Pulp industry)

GRAMAT, J.

Instruments for control and measurement and automatic machinery in the production of pulp and paper. P. 30.

30: East European Accessions List, Vol. 3, No. 9, Sept. 1954, Lib. of Congress



GRANAT, S.S.

Measuring instruments and automatic control in the woodpulp and paper industries. Bum.prom. 31 no.9:7-9 \$ '56. (MLRA 9:11)

1. Glavnyy konstruktor otdela avtomatiki Giprobuma.

(Paper industry) (Woodpulp industry) (Automatic control)

RAIMASOV, Yevgeniy Yekovlevich; ORRAZTSOV, K.I., retsenzent; QRAMAT, S.S., retsenzent; BABAKIN, B.I., red.; BARANOV, N.A., red.; SARMATSKATA, G.I., red.ixd-wa; SHITS, V.P., tekhn.red.

[Automatic control of processes in the manufacture of woodpulp and paper] Avtomaticheskoe regulirovante proteessov tselliulozno-bumazhnogo protzvodatva. Moskva, Goslesbumizdat, 1955, 248 p.

(Woodpulp industry)

(Paper manufacture)

(Automatic control)

GRAHAT, 5.8., insh.

Means of effecting sutomation in woodpulp and paper manufacture.
Bum.prom. 32 no.11:28-29 m '57. (MIRA 11:1)

1.Giprobum.

(Woodpulp industry) (Paper industry)

(Automatic control)

PREOBRAZHENSKIY, L.N.; GRANAT, S.S.

Prospects and problems of automation in the woodpulp production. Bum.prom. 37 no.10:6-8 0 '62. (MIRA 15:11)

l. Otdel avtomatiki Gosudarstvennogo instituta po proyektirovaniyu predpriyatiy tsellyuloznoy i bumazhnoy promyshlennosti. (Woodpulp industry) (Automation)

いっているというできることであることであることであることできます。

GRANAT, S.S.; BALLEASOV, Ye.Ya., nauchn. red.; POSTNOVA, I.D., red.; SHENDAREVA, L.V., tekhn. red.

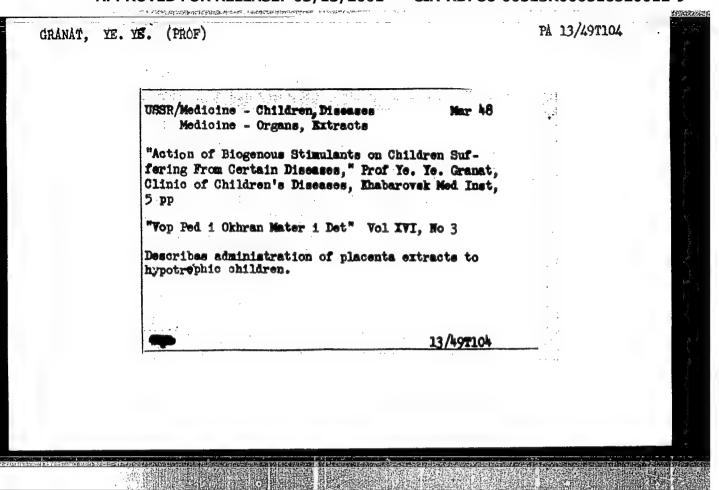
[Control of the composition of the paper stock] Regulirovanie kompozitsii bumazhnoi massy. Moskva, TSentr. in-t tekhn. informatsii i ekon. issledovanii po lesnoi, bumazhnoi i derevoobrabatyvaiushchei prom. 1963. 30 p. (MIRA 17:3)

1. Gosudarstvennyy institut po proyektirovaniyu tsellyuloznobumazhnoy promyshlennosti (for Granat).

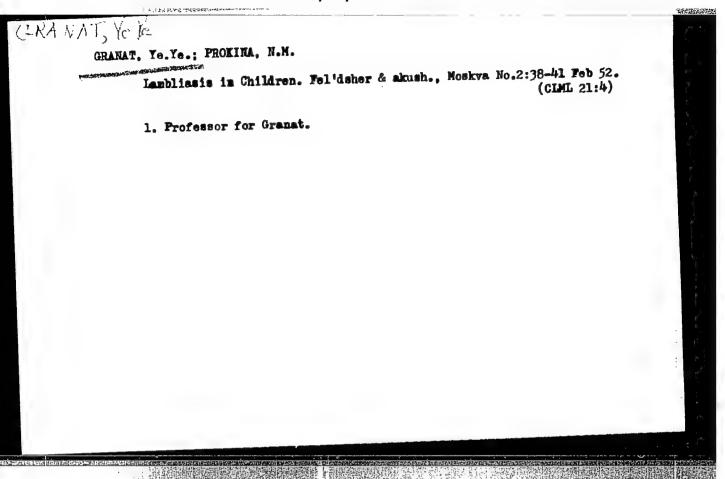
GRANAT, YE. YE.

Granat, Ye. Ye. "Tissue therapy in children," Trudy VI Vsesoyuz. s'yezda det.
Vrachey, posvyashch. pamyati prof. Filatova, Moscow, 1948, p. 90-95

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)



GRAPAT YE. YE. Mar/Apr 49 USSR/Medicine - Immunity Medicine - Influenza "Medical News" 1 p "Pediatriya" No 2 Fifth Session of Acad Med Sci convened 23 - 27 Dec 48 in Moscow. Two problems were considered: immunity and influenza. Prof Ye. Ye. Granat, Children's Clinic, Khabarovsk Med Inst, has completed 25 years of medical, pedagogical, and scientific work. First and Second Moscow Med Institutes have set up Correspondence Bureaus to render assistance to their graduate doctors. 41/49182 IC.



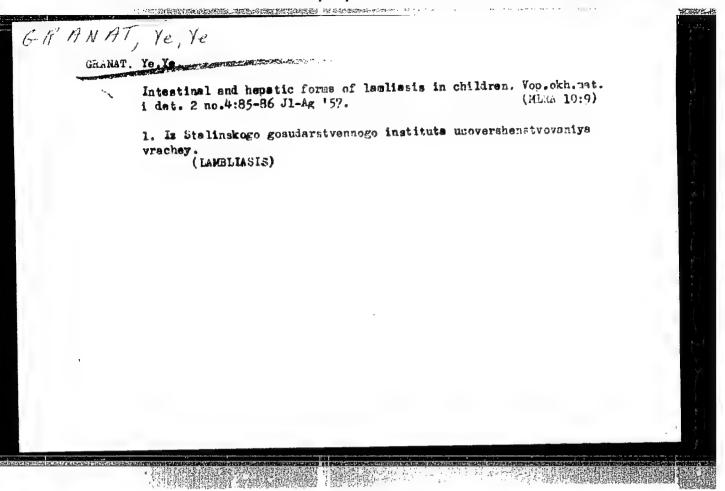
KAPCHITS-GUREVICH, R.R.; GRANAT, Ye.Ye., professor, direktor.

TO SEAL DESCRIPTION OF THE PROPERTY OF THE PRO

Treatment with allilsate of lamblissis in children. Sov.med. 17 no.7:34-35 Jl '53. (MLRA 6:8)

1. Klinika detakikh bolesney Stalinskogo instituta usovershenstvovaniya vrachey. (Garlic-Therapeutic use) (Intestines-Diseases)

GRANAT, We Te., professor (Stelinsk) Effect of hetero- and homopreparations, processed by V.P.Filatov's method, on the titer of heterophil antibodies. Wrach.delo no.8:881 (NIEA 10:8) Ag *57. 1. Klinika detskikh bolesnsy (sav. - professor We.We.Grenat) Institut usoversbenstvoveniya vrachsy (AFFIGENS AND ANTIBODIES)



USSR / General Problems of Pathology. Transplantation U=2 of Tissues and Tissue Therapy.

Abs Jour: Ref Zhur-Biol., No 15, 1958, 70731.

Author . Granata Ye. Ye.

: Not given. Inst

: The Effect of Heterogenic and Homogenic Tissue Title Extracts Processed According to the Filatov Method, on the Titer of Heterophilic Antibodies.

Orig Pub: Vrachebn. Delo, 1957, No 8, 881-882.

Abstract: The titer of rabbit heterophilic antibodies in agglutination of ram's erythrocytes increases with age. Injections of distilled water retarded the increase of titer with age in most rabbits. The injection of an extract of human placenta produced a decrease of titer [titer of heterophilic antibodies]. A decrease of titer was noted in six

Card 1/2

CIA-RDP86-00513R000516520012-9 APPROVED FOR RELEASE: 03/13/2001 USSR / General Problems of Pathology. Transplantation of Tissues and Tissue Therapy.

Abs Jour: Ref Zhur-Biol., No 15, 1958, 70731.

Abstract: rabbits out of the 11 who had been injected with pulverized placenta. Sixteen of the twenty rabbits who had been injected with an extract of rabbit placenta or had received muscle graft of rabbit of rabbit tissue showed an increase in titer of heterophilic antibodies. -- Ts. S. Lemberg

GRANAT, Ye.Ye. prof.

Olinical supects and etiology of the Schonlein-Henoch disease in children. Yop. okh. mat. i det. 3 no.5132-35 S-0 158

(MIRA 11:11)

1. Iz kliniki detakikh bolezney (zav. prof. Ye.Ye. Granat)
Stalinekogo instituta dlya usoverahenstvovaniya vrachey.

(CHILDREN-DISEASES)
(PURPURA (PATHOLOGY))

GRANAT, Ye.Ye.

Titer of hetrophil antibodies in healthy and sick children.

Vop.okh.mat. i det. 3 no.6:81-82 N-D '58 (MIRA 11:12)

1. Iz Chelyabinskogo meditsinskogo instituta: (ANTIGENS AND ANTIBODIES)

GRAMAT, Ye, Ye.; TYURINA, W.S.

Cancer in children. Vop. onk. 5 no.1:94-98 '59. (MIRA 12:3)

1. Is kliniki detskikh bolesney (zav. - prof. Ye.Ye. Gramat)
Chelyabinskogo meditsinskogo instituta (dir. - prof. G.D. Obrastsov)
Adres avtorov: g. Chelyabinsk, Meditsinskiy institut.

(MEOPIASMS, in inf. & child,

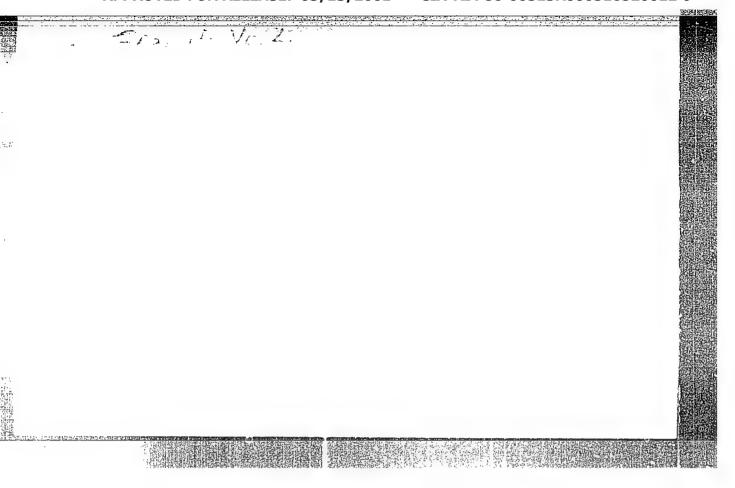
(Rus))

GRANAT, Ye. Ye.: TYURINA, N.S.

Influenza in Chelyabinsk children in 1957. Pediatriia 37 no.6:87 Je 59. (MIRA 12:9)

1. Is kafedry detskikh bolezney Chelyabinskogo meditsinskogo instituta.

(CHELYABINSK--INFLUENZA)



· 中国的国际,这种专种工程和自己的国际工程的企业。

s/089/62/012/001/003/019 B102/B138

26.2243

AUTHORS:

Antonov, A. V., Granatkin, B. V., Merkul'yev, Yu. A.,

Smolik, Ch. K.

Pulse method study of neutron diffusion and thermalization TITLE:

in water and ice in a wide temperature range

PERIODICAL: Atomnaya energiya, v. 12, no. 1, 1962, 22 - 29

TEXT: The method, apparatus and results are described, of the investigation of non-steady neutron diffusion in water and ice at 0.5 - 286°C and down to -196°C. The pulse method used has been described by Dardel

(Phys. Rev, 96, 1245, 1954) and I. M. Frank. The neutrons, from T(d,n)He4 reactions, were modulated with a repetition frequency of 250 cps at a

pulse duration of 15 μ Bec. The neutrons were recorded with a B $^{10}{
m F}^3$ counter, the counter pulses were fed to a 20-channel time analyzer (dead time 10 µsec), designed by I. V. Shtranikh, A. Ye. Voronkov, A. M. Volkov and K. P. Dudareva. An apparatus was designed for studying neutron diffusion in water at 0.5, 3, 7, 20, 71, 98, 136, 138, 159, 200, 250 and

Card 1/4

Pulse method study of ...

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286°C. The following parameters were measured: neutron life (T) and diffusion coefficient (D), coefficient of diffusion cooling (C) non-diffusion correction (d) (N. Sjöstrand. Arkiv fys. 15, 147 (1959)) transport free path $(\lambda_{\rm tr})$, transport cross section $(\sigma_{\rm tr})$, diffusion length (L) and mean cosine of neutron scattering angle $(\cos\theta)$. For water at 21°C the following diffusion parameters were measured: $T = 207 \pm 7 \,\mu{\rm sec}$, $D = (0.35 \pm 0.01) \cdot 10^5 \,{\rm cm}^2/{\rm sec}$, $C-d = (0.04 - 0.01) \cdot 10^5 \,{\rm cm}^4/{\rm sec}$. The diffusion parameters for ice at -196°C are given in the table. The experimental values were approximated by means of the following formulas:

 $\frac{D(t^{\circ}C)}{D(21^{\circ}C)} = (0.934 \pm 0.028) +$ $+ (0.289 \pm 0.009) 10^{-2}t +$ $+ (0.106 \pm 0.03) 10^{-4}t^{2}.$ (5)

 $\cos \theta = 1 - \lambda_s/\lambda_{tr} (\lambda_s - \text{scattering mean free path}),$

Card 2/4

Pulse method study of ...

$$\frac{L(t)}{L(22^{\circ}C)} = \frac{1}{\varrho} \left[\frac{t + 273, 1}{294, 1} \right]^{1/3} \times \left[\frac{1,0614}{1 + 0,0614} \left[\frac{t + 273, 1}{294, 1} \right]^{1/3} \right]^{1/3}, \quad (9)$$

$$\frac{(C-d)(t)}{(C-d)(21^{\circ} \text{ C})} = (0.987 \pm 0.098) + + (0.619 \pm 0.031) 10^{-3} t + + (0.348 \pm 0.104) 10^{-4} t^{2}.$$
 (10)

$$\varepsilon = \frac{1}{6} \frac{D^{3}}{C} \frac{\overline{\lambda}_{s}}{\overline{v}} \left(1 + \overline{v} \frac{d \ln \overline{\lambda}_{tr}}{d\overline{v}} \right) \times \left(2 \frac{E_{B}}{kT} - 3 \right), \tag{11}$$

(ϵ - energy transferred by one neutron per collision). The heat-exchange constant $\gamma = D^2/C$ was $(3.10 \pm 0.35) \cdot 10^5$ sec⁻¹, $\epsilon = 0.23 \pm 0.07$. Conclusions: Anisotropy in the angular distribution of scattered neutrons increases with temperature. In water at room temperature neutron thermalization satisfies Dardel's theory (Trans. Roy. Inst. Technol. No. 75, 1954) when the deviation of the neutron temperature from equilibrium is only small. In ice at -196°C the neutron gas is in equilibrium with the ice. Equilibrium is established 45 - 75 μ sec after slowing down begins. This

Card 3/4

32000 \$/089/62/012/001/003/019 B102/B138

Pulse method study of ...

slowing-down time is much greater than in water. The authors thank I. M. Frank for interest, B. V. Makarov, V. M. Gulikov, V. V. Talakvadze, and Ye. A. Velichenkova for assistance. There are 7 figures, 1 table, and 17 references: 3 Soviet and 14 non-Soviet. The four most recent references to English-language publications read as follows: K. Beckurts. Symposium on "In Pile Neutron Spectra and Pulsed Neutrons Methods". Denmark, 1960; D. Hughes et al. Phys. Rev., 119, 872 (1960); D. Hughes, R. Schwards. Neutron Cross Sections. New York, 1958; K. Rockey, S. Skolnik. Nucl. Sci. Engng, 8, 62 (1960).

SUBMITTED: July 1, 1961

					Table				
1	t, *G	Q, с/см ³	Т, мисек	10 ⁸ см ⁸ /сек	(C-d). 105 cm4/ces	L, cm	σ _{tr} , δαρκ	λ _{іт} , см	cos 8
	—196 —	0,917 <u>±</u> 0,010	215±10 222	0,095±0,004 0,105±0,004	0,02±0,01 0,025±0,10	1,43±0,07 1,53±0,08	146±6 132±6	0,224±0,009 0,248±0,010	0,10±0,95

Card 4/4

 ANTONOV, A.V.; GRANATKIN, B.V.; MERKUL'YEV, Yu.A.; PUZANOV, V.V.; SMOLIK, Ch.K.

Neutron diffusion for water and ice at temperatures near 0°C and -80°C. Atom. energ. 13 no.4:373-374 0 '62. (MIRA 15:9) (Neutrons—Scattering)

MEL'NIKOVA, O., arkhitektor; GRANATKIN, G., arkhitektor

Universal four-story industrial building. Prom.stroi.i insh.soor.

4. no.1:10-14. Ja-F '62.

(Industrial buildings) (Precast concrete construction)

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Authors: Antonov, A. V.; Merkul'yev, Yu. A.; Granatkin, B. V. CRG: none Better: Temperature dependence of the diffusion parameters of neutrons in water and in ice SOURCE: Atomnaya energiya, v. 20, no. 2, 1966, 164-165 FOPIC TAGS: neutron diffusion, temperature dependence, water, neutron cross section, transport property Abstract: This is a continuation of earlier work by the authors Atomnaya energiya v. 12, 22, 1962 and 13, 373, 1962), where they reletermined the temperature dependence of the diffusion coefficient of the diffusion-cooling coefficient of the diffusion of t	CC NR: AP6007959 SOURCE CODE: UR/0089/66/020/002/0164/01	
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section of thermal neutrons and their temperature dependence. They also calculated the temperature dependence of the mean square of the exchange energy for water and for ice, with allowance for the non-diffusion correction of the diffusion coefficient. The calculations show that when water is heated the mean square exchange energy per hydrogen atom increases, thereby increasing the diffusion motion of the molecules in the water and weakening the interaction between the liquid molecules. The reasons for this increase are the weakening of the molecular forces that prevent the exchange of energy between neutrons with increasing temperature, and the fact that the rotational motion of the water molecules approaches the motion of the free rotator. The earlier investigation was based on the assumption that the transport cross section is proportional to the reciprocal square root of the energy, and the present results confirm this assumption. The authors thank I. M. Frank and M. V. Kazarnovskiy for reviewing the article and remarks. Orig. art. has: 2 figures and 2 formulas.

SUB CODE: 20/ SUEM DATE: 25Aug 65/ ORIG REF: 004/ OTH REF: 004

Card 902/2

GRANATMAN, Vsevolod Vladimirovich; KHUTORFNKO, I.A., red.

[Logic elements using cold-cathode tubes] Logicheskie ele-

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menty na lampakh s kholodnym katodom. Leningrad, 1964.

23 p. (MIRA 17:9)

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BOOK EXPLOITATION

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Granatman, Vsevolod Vladimirovich; Danilov, Vladimir Ivanovich, Kiryachek,

Industrial contactless apparatus with discrete action; a survey (Promy*shlennaya beskontaktnaya apparature diskretnogo deystviya; obzor), Leningrad, LDNTP, 1963, 102 p. illus., biblio. 4,500 copies printed. (At head of title: Leningradskoye otdeleniye Obshchestva po rasprostraneniyu politicheskikh i nauchny*kh znaniy RSFSR)

Series Note: Leningradskiy Dom nauchno-tekhnicheskoy propagandy*. Seriya: Pribory* i elementy* avtomatiki

TOPIC TAGS: contactless apparatus, automation, magnetic core, automation, magnetic logic element, ferrite transistor logic element, square hysteresis loop

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LADYZHENSKIY, M.M.; LYUBOMIRSKAYA, S.I.; TANKHILEVICH, V.A.;
TOMASHEVSKAYA, I.A.; TSIRKEL', M.L.; GRANATMAN, V.V.,
red.

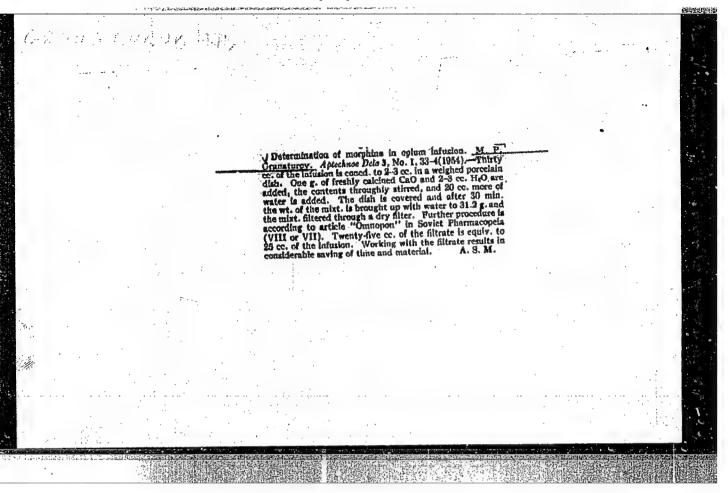
[Use of TK-3B,TKh-4B, and TKh-5B cold-cathode thyratrons in pulse circuits] Opyt primeneniia tiratronov s kholodnym katodom tipov TK-3B, TKh-4B, TKh-5B v impul'snykh skhemakh. Leningrad, 1964. 22 p. (MIRA 17:11)

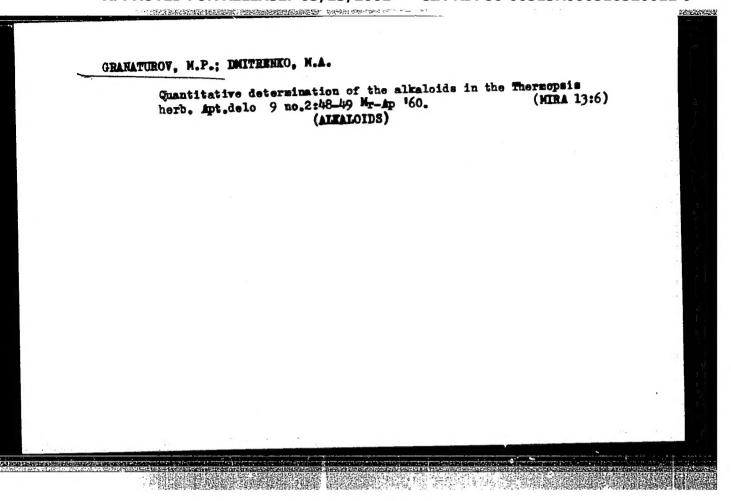
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GRANATUROV, G., mayor, master sporta SSSR

Mikhail Osintsev plays in the first line. Starsh.-serzh. no.11:39 O[i.e. N] '61. (MIRA 15:2)

1. Predsedatel* komiteta po khokkeyu s myachom Federatsii khokkeya
SSSR.
(Hockey)





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CIA-RDP86-00513R000516520012-9

GRANATYUK, P.N.; RADZIVONCHIK, Ye.A.

The medical center in the control of trauma and suppurative diseases. Zdrav. Turk. 3 no.6:37-38 N-D *59. (MIRA 13:5)

1. Is shelesnodoroshnoy bol'nitsy stantsii Mary, Turkmenistav. (RAIIROADS--REPAIR SHOPS--HYGIENIC ASPECTS)

GREETSOV, G.I., kand. ekon. nauk, dots.; SMEKHOV, B.M., kand. ekon. nauk, dots.; SMOLYAR, L.I., starshiy prepodavatel'; GRANBERG, A.C.; AGANEEGYAN, A., kand. ekon. nauk, red.; KONIKOV, L.A., red.; GERASIMOVA, Ye.S., tekhn. red.

[Principles of working out an interbranch balance]Osnovy razrabotki mezhotraslevogo balansa; uchebnoe posobie. [By]G.I.Grebtsov i dr. Moskva, Ekonomizdat, 1962. 278 p. (MIRA 16:3)

1. Wychislitel'nyy tsentr Gosudarstvennogo nauchno-ekonomicheskogo soveta Soveta Ministrov SSSR (for Granberg).

(Russia—Economic policy)

(Programming (Electronic computers))

BURSHTEYN, Feliks Isayevich; GUSEV, Vladimir Timofeyevich;
GRANEERA, A.G., nauchn. red.; KONIKOV, L.A., red.izd-va;
PONOMAREVA, A.A., tekhn. red.

[What an interbranch balance is] Chto takoe mezhotraslevoi
balans. Moskva, Ekonomizdat, 1963. 85 p. (MIRA 16:10)

(Russia—Economic policy)

(Industrial statistics)